

M thod For Producing The Image Of The Internal Structure Of An Object And A Device For Its Embodiment

Abstract

Inventions related to the intra-vision means, designed for production of visually sensed images of the internal structure of an object, in particular, of a biological object, are aimed at higher accuracy of determining the relative density indices of the object's substance in the obtained image together with avoiding complex and expensive engineering; when used for diagnostic purposes in medicine, the dosage of tissues surrounding those that are examined is decreased.

X-rays from source 1 is concentrated (for example, using X-ray lens 2) in the zone that includes the current point 4, to which the measurement results are attributed and which is located within the target area 7 of the object 5. Excited in this zone secondary scattered radiation (Compton, fluorescent) is transported (for example, using X-ray lens 3) to one or more detectors 6. By moving the said zone, the target area 7 of object 5 is scanned, and based on population of the intensity values of the secondary radiation, which are obtained with the help of one or more detectors 6 and which are determined concurrently with coordinates of the current point 6, judgment on the density of the object's substance in this point is made. Density values together with respective coordinate values obtained using sensors 11 are used in the means 12 for data processing and imaging to build up a picture of substance density distribution in the target area of the object.